

Case 3335***Trachys* Fabricius, 1801 (Insecta, Coleoptera): proposed fixation of the feminine gender of the genus and the form of derivation of family-group names based on *Trachys***

S. Bílý

Department of Entomology, National Museum, Kunratice 1, 148 00 Praha 4, Czech Republic (e-mail: svatopluk_bily@nm.cz)

V. Kubáň

Department of Entomology, Moravian Museum, Hviezdoslavova 29a, 627 00 Brno, Czech Republic (e-mail: vkuban@volny.cz)

Abstract. The purpose of this application, under Articles 29.3 and 30 of the Code, is to validate the feminine gender of the genus-group name *Trachys* Fabricius, 1801 for a common and widespread leaf-mining jewel beetle and the form of derivation of family-group names based on *Trachys*.

Keywords. Nomenclature; taxonomy; Coleoptera; BUPRESTIDAE; *Trachys*; *Trachys minuta*; gender; leaf-mining jewel beetle.

1. Fabricius (1801, p. 218) introduced the generic name *Trachys* including eleven nominal species: *Trachys tessellata* Fabricius, 1801, *T. ephippium* Fabricius, 1801, *Buprestis pygmaea* Fabricius, 1787, *T. rugosa* Fabricius, 1801, *B. minuta* Linnaeus, 1758, *T. terminans* Fabricius, 1801, *T. fastigiata* Fabricius, 1801, *T. pulchella* Fabricius, 1801, *T. exigua* Fabricius, 1801, *T. pusilla* Fabricius, 1801 and *B. nana* Paykull, 1799. None was designated or indicated as the type species. Fabricius treated *Trachys* as a feminine name as evident from the endings of all the specific names included, and from his use of the feminine genitive *Trachydis*.

2. Westwood (1840, p. 25) designated *Buprestis minuta* Linnaeus, 1758 as the type species of *Trachys*.

3. There is no uniformity in interpretation of the gender of *Trachys* in the literature. Many principal works on BUPRESTIDAE since Fabricius (1801) have accepted *Trachys* as feminine. These include the works of Dejean (1821, pp. 30–31; 1833, p. 83; 1836, p. 94), Gory & Laporte (1840, pp. 1–11), Kiesenwetter (1849, p. 41; 1857, pp. 166–172), Lacordaire (1857, p. 88), Dohrn (1858, p. 51), Deyrolle (1864, pp. 237–268), Marseul (1866, pp. 504–519), Gemminger & Harold (1869, pp. 1452–1454), Saunders (1871, pp. 130–132), Stein & Weise (1877, p. 91), Heyden, et al. (1883, p. 105; 1891, p. 201; 1906, p. 420), Kerremans (1892, pp. 284–289; 1903, pp. 307–314), Théry (1905, pp. 148–166; 1925, p. 177; 1948, pp. 60–82), Jakobson (1913, p. 780), Schaefer (1936, pp. 120–123; 1956, pp. 45–48), Obenberger (1937, pp. 1352–1409), Kurosawa (1959, pp. 204–247), Descarpentries & Villiers (1965, pp. 723–735), Rikhter & Alexeev (1965, pp. 294–295), Bílý (1977, pp. 46–47), Burakovski et al. (1985, pp. 82–86), Alexeev (1989, pp. 476–477) and Bellamy (2003, pp. 95–96). Other works have treated *Trachys* as masculine including Schaum (1862,

p. 57), Stein (1868, p. 64), Bedel (1921, p. 169), Théry (1930, pp. 520–540; 1942, pp. 182–198), Schaefer (1947, pp. 166–167; 1949, pp. 460–480), Horion (1955, pp. 117–124), Harde (1979, pp. 246–248), Bílý (1982, pp. 87–91), Cobos (1986, pp. 278–289), Curletti (1994, pp. 199–207), Köhler & Klausnitzer (1998, p. 103) and Arnáiz Ruiz et al. (2002, p. 62). It is desirable to resolve the problem of the interpretation of the gender of *Trachys* because several large works dealing with the entire buprestid systematics of the Palaearctic region or the world fauna (FaEu project, Catalogue of the Palaearctic Beetles, World Catalogue of Buprestidae) are nearing completion.

4. Kraatz (1859, p. 59 in Schaum, 1859; Kraatz, 1870, p. 31) was the first to suggest that *Trachys* is masculine, but reversed his opinion after the published discussion between him and von Harold (1869, p. 117; 1870, p. 116). It is evident that many recent authors (e.g. Théry, Schaefer, Horion) followed Bedel (1921, p. 166) who commented and reopened the *Trachys* gender case.

5. Article 30.1.4.2 (Gender of genus-group names) may allow for the solution to this problem: 'A genus-group name that either is, or ends in, a word of common or variable gender (masculine or feminine) is to be treated as masculine unless its author, when establishing the name, stated that it is feminine or treated it as feminine in combination with an adjectival species-group name [Art. 31.2]'. However, a question remains here as it seems clear that there is no indication that *Trachys*, or its stem, is of common or variable gender.

6. We realize that strictly speaking the name '*Trachys*' should be treated as masculine (feminine form would be *Tracheia*). But Fabricius created his names in a rather free, non-standard and sometimes grammatically incorrect way (see also Harold, 1870). For this reason we should accept '*Trachys*' as a non-standard name, which according to Prof A. Bartoněk, a linguist and specialist in ancient Greek, can be treated as feminine to maintain the author's intention.

7. The first author who established a family-group name derived from *Trachys* was Laporte (1835, p. 166); he used the form 'Trachisites, Trachisidae'. Because we propose confirmation of the feminine gender for *Trachys*, we also propose, following Article 29.3.3 and Recommendation 29A of the Code, to form the family-group names TRACHYSIDAE, TRACHYSINAE and TRACHYSINI by adding the suffix -dae to the whole name *Trachys* in accordance with Laporte (1835, p. 166).

8. It is proposed that the names TRACHEIDAE Gistel, 1848 (p. 3); TRACHINAE Obenberger, 1926 (p. 651); TRACHYINAE Gavoy, 1897 (p.133); TRACHYDINI Reitter, 1911 (p. 180); TRACHYNI Kerremans, 1893 (p. 121) and TRACHYNINI Kraatz, 1869 (p. 36) are considered invalid as incorrectly derived from *Trachys*.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to rule that:

- (a) the gender of the genus-group name *Trachys* Fabricius, 1801 is feminine;
- (b) the family-group names derived from the genus-group name *Trachys* should be formed by adding the appropriate ending to the name of the genus in the nominative case (e.g. TRACHYSIDAE, TRACHYSINAE, TRACHYSINI);

(2) to place on the Official List of Generic Names in Zoology the name *Trachys* Fabricius, 1801 (gender: feminine), type species *minuta* Linnaeus, 1758, by subsequent designation by Westwood, 1840, as published in the binomen *Buprestis minuta*;

- (3) to place on the Official List of Specific Names in Zoology the name *minuta* Linnaeus, 1758, as published in the binomen *Buprestis minuta* Linnaeus, 1758 (specific name of the type species of *Trachys* Fabricius, 1801);
- (4) to place on the Official List of Family-Group Names in Zoology the name TRACHYSIDAE Laporte, 1835 (type genus *Trachys* Fabricius, 1801).
- (5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the following names, as incorrectly derived from *Trachys* Fabricius (1801):
 - (a) TRACHEIDAE Gistel, 1848;
 - (b) TRACHINAE Obenberger, 1926;
 - (c) TRACHYINAE Gavoy, 1897;
 - (d) TRACHYDINI Reitter, 1911;
 - (e) TRACHYNI Kerremans, 1893;
 - (f) TRACHYNINI Kraatz, 1869.

Acknowledgements

We thank Prof A. Bartoněk (*Department of Classical Studies, Masaryk University, Brno, Czech Republic*) for advice on the treatment of the name *Trachys*.

References

- Alexeev, A.V. 1989. Buprestidae – Zlatki. Pp. 463–489 in Ler, P.A. (Ed.), *Opređitel' nasekomykh Dal'nego Vostoka SSSR, Tom 3, Zhestkokrylye, ili zhuki, Chast' 1*. 572 pp. Nauka, Leningrad.
- Arnáiz Ruiz, L., Bercedo Páramo, P. & Sousa Zuzarte, A.J. de. 2002. Corología de los Buprestidae de la Península Ibérica e Islas Baleares (Coleoptera). *Boletín de la Sociedad Entomológica Aragonesa*, **30**: 37–80.
- Bedel, L. 1921. *Faune des coléoptères du bassin de la Seine. Tome IV. Deuxième Fascicule – Serricornia*. Pp. 165–234. Firmin-Didot, Paris.
- Bellamy, C.L. 2003. An illustrated summary of the higher classification of the superfamily Buprestoidea (Coleoptera). *Folia Heyrovskyana*, Suppl. **10**: 1–197.
- Bílý, S. 1977. *Klíč k určování československých krasců. Buprestidae, Coleoptera*. 51 pp. Academia, Praha.
- Bílý, S. 1982. The Buprestidae of Fennoscandia and Denmark. *Fauna Entomologica Scandinavica*, **10**: 1–110.
- Burakowski, B., Mroczkowski, M. & Stefańska, J. 1985. *Chrząszcze. Coleoptera. Buprestoidea. Elateroidea i Cantharoidea. Katalog fauny polski. Catalogus faunae Poloniae*, part 23, vol. 10. 401 pp. Państwowe wydawnictwo naukowe, Warszawa.
- Cobos, A. 1986. *Fauna Iberica de Coleopteros Buprestidae*. 364 pp. Imp. Aguirre, Madrid.
- Curletti, G. 1994. I Buprestidi d'Italia. Catalogo tassonomico, sinonimico, biologico, geonomico. *Natura Bresciana* (Brescia), *Monografie*, **19**: 1–318.
- Dejean, P.F.M.A. 1821. *Catalogue de la collection de Coléoptères de M. le Baron Dejean*. Crevot, 8, 136, [2] pp. Paris.
- Dejean, P.F.M.A. 1833. *Catalogue des Coléoptères de la collection de M. le Comte Dejean*, section 1–12. Pp. 1–96. Méquignon-Marvis, Paris.
- Dejean, P.F.M.A. 1836. *Catalogue des Coléoptères de la collection de M. le Comte Dejean. Troisième édition, revue, corrigée, et augmentée*. 1–384 pp. Méquignon-Marvis, Paris.
- Descarpentriès, A. & Villiers, A. 1965. Catalogue raisonné des Buprestidae d'Indochine. VII. Trachydini (2e partie). Genre *Trachys*. *Annales de la Société Entomologique de France* (N. S.), **1**: 723–735.
- Deyrolle, H. 1864. Description des Buprestides de la Malaisie recueillis par M. Wallace. *Annales de la Société Entomologique de Belgique*, **8**: 1–312.

- Dohn, C.A.** 1858. *Catalogus Coleopterorum Europae*. Siebente Auflage. [3], 104, 15 pp. R. Grassmann, Stettin.
- Fabricius, J.C.** 1801. *Systema Eleutheratorum secundum ordines, genera, species: adiectis synonymis, locis, observationibus, descriptionibus. Tomus II.* 687 pp. Bibliopoli academici novi, Kiliae.
- Gavoy, L.** 1897. Catalogue des Insectes coléoptères trouvés jusqu'à ce jour dans le département de l'Aude. *Bulletin de la Société Étude Scientifique Aude*, **8**: 163–212.
- Gemminger, M. & Harold, E. von.** 1869. *Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus. Tom. V. Buprestidae, Trixagidae, Monommidae, Eucnemidae, Elateridae, Cebionidae*. Pp. 1347–1608. Sumptu E.H. Gummi, Monachii.
- Gistel, J.** 1848. Faunula monacensis cantharologica. *Isis*, **7**: 3.
- Gory, H.L. & Laporte de Castelnau, F.L.** 1840. Genre *Brachys*. Pp. 4–9, *Trachys*, 11 pp. (genera paged separately) in *Histoire naturelle et iconographie des insectes Coléoptères, publiée par monographies séparées. Monographie de la tribu des Buprestides*, vol. 2, livraisons 36–42. P. Duméril, Paris.
- Harde, K.W.** 1979. 38. Familie: Buprestidae (Prachtkäfer). Pp. 204–248 (excl. gen. *Agrilus*, pp. 230–243) in Freude, H., Harde, K.W. & Lohse, G.A. (Eds.), *Die Käfer Mitteleuropas. Band 6, Diversicornia*. Goecke & Evers Verlag, Krefeld.
- Harold, E. von.** 1869. Berichtigungen und Zusätze zum *Catalogus Coleopterorum synonymicus et systematicus. Coleopterologische Hefte*, **5**: 112–119, 122–125.
- Harold, E. von.** 1870. Ueber den Gattungsnamen *Trachys. Coleopterologische Hefte*, **6**: 116.
- Heyden, L.F.J.D. von, Reitter, E. & Weise, J.** 1883. *Catalogus Coleopterorum Europae et Caucasi. Editio tertia.* (Buprestidae by E. Reitter). [3], 228 pp. Libraria Nicolai, Berlin.
- Heyden, L.F.J.D. von, Reitter, E. & Weise, J.** 1891. *Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae.* (Buprestidae by E. Reitter). **8**, 420 pp. R. Friedländer & Sohn, Berlin; E. Reitter, Mödling; *Revue d'Entomologie*, Caen.
- Heyden, L.F.J.D. von, Reitter, E. & Weise, J.** 1906. *Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae. Editio secunda.* (Buprestidae by E. Reitter). [8], 775 pp. R. Friedländer & Sohn, Berlin; E. Reitter, Paskau; *Revue d'Entomologie*, Caen.
- Horion, A.** 1955. Faunistik der mitteleuropäischen Käfer. Sternoxia (Buprestidae). Fossipedes, Macroductylia, Brachymera. *Entomologische Arbeiten aus dem Museum G. Frey*, **4**: 1–21, 1–280.
- Jakobson, G.G.** 1913. *Zhuki Rossii i zapadnoi Evropy. Rukovodstvo k' opredeleniyu zhukov*, vol. 10. [2], 721–864 pp., pls. 76–83. A.F. Devrien, S. Petersburg.
- Kerremans, C.** 1892. Catalogue synonymique des Buprestides décrits de 1758 à 1890. *Mémoires de la Société Entomologique de Belgique*, **1**: 1–304.
- Kerremans, C.** 1893. Essai de groupement des Buprestides. *Annales de la Société Entomologique de Belgique*, **37**: 94–122.
- Kerremans, C.** 1903. Coleoptera Serricornia. Fam. Buprestidae. Pp. 49–338 in Wytzman, P. (Ed.), *Genera Insectorum*, fasc. 12b; 12c; 12d. Verteneuil & Desmet, Bruxelles.
- Kiesenwetter, H. von.** 1849. *Catalogus Coleopterorum Europae. 3. Auflage.* 82 pp. Stettiner Ent. Ver., Bautzen.
- Kiesenwetter, H. von.** 1857. Buprestidae, Eucnemidae. Pp. 1–176 (Bogen 1–11) in Kiesenwetter, H. von. 1857–1863: *Vierter Band, Buprestidae-Lymexylidae, Nachträge, Zusätze und Berichtigungen*, **6**, 746 pp. in *Erichson, W.F., Schaum, H., Kraatz, G. & Kiesenwetter, H. von. Naturgeschichte der Insecten Deutschlands. Erste Abtheilung. Coleoptera*. Nicolai'sche Verlagsbuchhandlung, Berlin.
- Köhler, F. & Klausnitzer, B.** 1998. Verzeichnis der Käfer Deutschlands. *Entomologische Nachrichten und Berichte* (Dresden), Beiheft **4**: 1–185.
- Kraatz, G.** 1869. *Verzeichnis der Käfer Deutschlands*. **7**, 84 pp. Nicolai'sche Verlagsbuchhandlung, Berlin.
- Kraatz, G.** 1870. Ueber den Gattungsnamen *Trachys. Coleopterologische Hefte*, **6**: 31–32.
- Kurosawa, Y.** 1959. A revision of the leaf-mining buprestid-beetles from Japan and the Loo-Choo Islands. *Bulletin of the National Science Museum (Tokyo)*, **4** (2): 202–268.
- Lacordaire, J.T.** 1857. *Histoire naturelle des insectes. Genera des Coléoptères ou exposé méthodique de critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes*,

- Tome quatrième contenant les familles des buprestides, throscides, eucnémides, élatérides, cébrionides, cérophytides, rhpicérides, daseyllides, malacodermes, clérides, lymèxylones, cupésides, phtiores, bostrichides et cissides.* 554 pp. Librairie encyclopédique de Roret, Paris.
- Laporte, F.L. de Castelnau.** 1835. Études entomologiques, ou descriptions d'insectes nouveaux et observations sur la synonymie. *Revue Entomologique* (Strasbourg & Paris), 3: 157-181.
- Marseul, S.-A. de.** 1866. Monographie des buprestides famille des sternoxes de Latreille. *L'Abeille, Mémoires d'Entomologie*, 2: 289-540.
- Obenberger, J.** 1926. Buprestidae. Pp. 625-663 in Winkler, A. (Ed.), *Catalogus Coleopterorum regionis palaearticae. Pars 6.* A. Winkler, Wien.
- Obenberger, J.** 1937. Buprestidae VI, pars 157. Pp. 1247-1714 in Junk, W. & Schenkling, S. (Eds.), 1936-1937: *Coleopterorum Catalogus*, vol. 13. W. Junk, Verlag für Naturwissenschaften, Gravenhage.
- Reitter, E.** 1911. *Fauna Germanica. Die Käfer des Deutschen Reiches. Nach der analytische Methode bearbeitet*, vol. 3. 436 pp., 48 pls. K.G. Lutz Verlag, Stuttgart.
- Rikhter, A.A. & Alexeev, A.V.** 1965. 48. Sem. Buprestidae-Zlatki. Pp. 283-303 in Bei-Bienko, G.Y. (Ed.), *Opređitel' nasekomykh Evropeiskoi chasti SSSR. Zhestkokrylye i veerokrylye*, vol. 2. 668 pp. Nauka, Moskva-Leningrad.
- Saunders, E.** 1871. *Catalogus Buprestidarum Synonymicus et Systematicus*. 171 pp. J. Janson, London.
- Schaefer, L.** 1936. Troisième note sur les Buprestides. *Miscellanea Entomologica*, 37: 117-123.
- Schaefer, L.** 1947. Notes sur la systématique et la morphologie des larves de Buprestides (Suite et fin). *Bulletin Mensuel de la Société Linnéenne de Lyon*, 16: 162-167.
- Schaefer, L.** 1949. Les Buprestides de France. Les Buprestides de France. Tableaux analytiques des Coléoptères de la faune franco-rhénane. France, Rhénane, Belgique, Hollande, Valais, Corse. Famille LVI. *Miscellanea Entomologica, Supplement*. 511 pp., 28 pls.
- Schaefer, L.** 1956. Un nouveau *Trachys* français (Col Buprestidae). *Annales de la Société d'Horticulture et d'Histoire Naturelle de l'Hérault*, 96: 45-48.
- Schumm, H.R.** 1859. *Catalogus Coleopterorum Europae*. 4, 121 pp. Nicolai'sche Verlagsbuchhandlung, Berlin.
- Schumm, H.R.** 1862. *Catalogus Coleopterorum Europae. Editio secunda aucta et emendata*. 138 pp. Nicolai'sche Verlagsbuchhandlung, Berlin.
- Stein, J.P.E.F.** 1868. *Catalogus Coleopterorum Europae*. iv, 149 pp. Friderici Nicolai, Berolini.
- Stein, J.P.E.F. & Weise, J.** 1877. *Catalogi Coleopterorum Europae. Editio Secunda*. 209 pp. Libraria Nicolai, Berolini.
- Théry, A.** 1905. *Revision des Buprestides de Madagascar*. 186 pp. E. Deyrolle, Paris.
- Théry, A.** 1925. Coléoptères Buprestides récoltés par M. de Morgan en Perse, pendant l'année 1904. *Bulletin du Muséum National d'Histoire Naturelle*, 1925: 171-177.
- Théry, A.** 1930. Études sur les Buprestides de l'Afrique du nord. *Mémoires de la Société des Sciences Naturelles du Maroc*, 19 (1928): 1-586.
- Théry, A.** 1942. *Coléoptères Buprestides. Faune de France*, 41. 223 pp. P. Lechevalier, Paris.
- Théry, A.** 1948. *Exploration du Parc National Albert, Mission G.F. de Witte (1933-1935)*. Fascicule 54. *Buprestidae (Coleoptera Sternoxia)*. 85 pp. Institut des Parcs Nationaux du Congo Belge, Bruxelles.
- Westwood, J.O.** 1840. Synopsis of the genera of British insects. 158 pp. (paged separately), in Westwood, J.O., *An introduction to the modern classification of insects; founded on the natural habits and corresponding organisation of the different families*, vol. 2. 11, 587 pp. Longman, Orme, Brown, Green, and Longmans, London.

Acknowledgement of receipt of this application was published in BZN 62: 2.

Comments on this case are invited for publication (subject to editing) in the Bulletin; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).